{In Archive} Fw: Technical assistance for audit findings in Great Basin

Mathew Plate to: Meredith Kurpius, MichaelA Flagg, Katherine Hoag, Elfego Felix 10/03/2011 02:30 PM

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All

I don't know enough about the TEOM operations to know if this is a problem. - One note though, some of these monitoring sites may be at elevations greater than the FEM was designed and tested to operate at -

For wind speed the only GB site that is required to have Met is the NCore site. We should check and see if this is the sensor used at the NCore site also. The criteria is clearly 0.5 m/s for NCore/SLAMS/PAMS. Otherwise I think that this is within the normal variability at Met stations, and is why I had Francisco working on looking into the possibility of a classification scheme for Met sites so we can better understand and use the data produced.

mat

----- Forwarded by Mathew Plate/R9/USEPA/US on 10/03/2011 02:19 PM -----

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Cc: "Rainey, Patrick@ARB" <prainey@arb.ca.gov>
Date: 10/03/2011 01:22 PM
Subject: Technical assistance for audit findings in Great Basin

Good Afternoon,

During a recent audit of the monitoring sites in Great Basin, we encountered several situations with the particulate and meteorological equipment used by the District. We could use some guidance on the below items:

1. QAS found the flow rates of the TEOM units (1400a or 1400a/FDMS) at the Mono Shore, Mammoth Lakes, and White Mountain monitoring sites were all within criteria, but one or more leak check values (main & aux/bypass) failed the leak test criteria (0.15 and 0.65LPM respectively). QAS had the District disconnect the vacuum pump from the sampler and read the non-linear offset value (NOV)/background flow value indicated on the instrument display in the absence of flow. All but one sampler (Mammoth Lakes) met audit criteria when the NOV value was added to the acceptance criteria (acceptance criteria + observed NOV= revised audit criteria). Each of the samplers audited had a different NOV value, so it does not appear to be a consistent value for all samplers. An SOP prepared by Sonoma Technology, Inc

(STI-905505.03-3657-SOP 9/1/09) for the TEOM 1405-DF, but applicable for the 1400a/FDMS units as well, includes Table 11-1 (Data Validation Criteria) that has “must meet” criteria of 0.3 and 1.2 LPM for the leak test criteria. All samplers met the “must meet” criteria. No AQDAs were issued at the time of the audit. Should the NOV value be considered in determining leak test criteria? Should an AQDA be issued for any of the samplers?

2. The starting threshold for the RM Young 05103 Wind Monitor at two of the sites exceeded the PAMs criteria (0.5m/s), but were within the manufacturer specification of 1.1m/s (see attached). The District was aware of the increased starting torque requirements of the sensor, but uses the RM Young 5103 units because of the reliability of the sensor’s bearing design in the high wind velocities and dust/particulate levels found in the area. No AQDA was issued for the sensors at the time of the audit because the starting torque was within the manufacturer specifications. Is this okay?

Thanks. Merrin

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RM Young 05103 Specs.pdf